



Executive Insights

Transformation to the Hybrid Enterprise

Sponsored by: Data#3 and EMC

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IDC OPINION

Over the past three years, the way in which cloud services are selected and employed has changed. The early tendency to reduce IT costs by effectively outsourcing an IT function to the cloud has evolved to a business-enabling requirement. CIOs report that they are no longer buying cloud services to replace ageing infrastructure or as a way to reduce capex costs but are looking for solutions to business requirements.

In preparing for a hybrid cloud future, IT executives must plan for more than a change of technology. An architectural transformation is required, along with people and process transformations, all aimed at delivering the ROI business units are demanding.

New applications that address business needs are only now available simply because they are based on what are now mature cloud platforms. Their increasing popularity is due to their cloud characteristics - those platforms bring fast deployment, minimal upfront costs and industry best practices. Cloud buyers are emerging in enterprise business units, and selection criteria are shifting from technology to business capability. For those in the business, it's the solution that matters.

METHODOLOGY

In this research study for Data#3 and EMC, IDC conducted independent interviews with CIOs from several Australian businesses. These interviews revealed different ideas of what constitutes a hybrid cloud. IDC notes that "Hybrid Cloud" describes an architecture, not a product (despite what many marketing campaigns may suggest to the contrary).

These interviews were conducted independently by IDC, using a standard set of questions to gain information about the organisation's experience with cloud services, with all analysis peer-reviewed by IDC subject matter experts. While specific vendor names were included in the discussion, they have been omitted from this publication.

IDC would characterise the interviews in the following ways: only two had cloud-first strategies with the remaining seven having cloud-also strategies. None of the CIOs had cloud-last strategies. This distribution supports IDC's view of the general IT manager profile in Australia."

IN THIS WHITE PAPER

This research paper summarises the findings from IDC conversations with end users around the use of public and private cloud environments in conjunction with their existing on-premises systems to start a journey to a manageable and cost-effective hybrid environment, and their recommendations on how to address implementation challenges.

A set of key themes consistently emerge from the interviews, offering valuable insights into how hybrid cloud solutions have challenged the capabilities of these Australian organisations but still delivered value for them.

SITUATION OVERVIEW

Australian organisation's understanding of cloud services has matured to the point where the use of cloud services is widespread. The breadth and quality of services available from cloud vendors has also increased dramatically since the peak of the cloud hype in 2009-10. Services now span the entire range from commodity infrastructure services to cloud-enabled business process services.

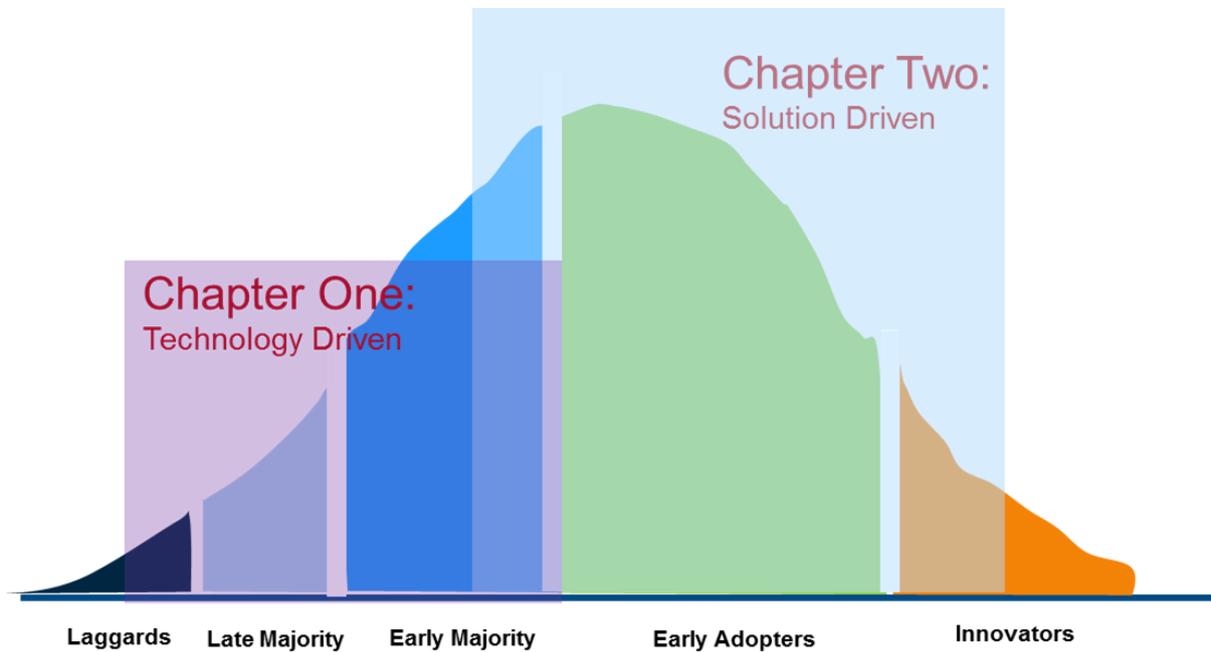
Cloud has grown beyond the initial use of replacing non-critical applications, such as email and under-utilised server farms, and broadened in step with the increased availability of cloud-based enterprise-class applications that can now take on mission-critical roles. The Australian cloud market is currently in Chapter Two, the second stage of Cloud development (see Figure 1).

In "Chapter Two", cloud services demonstrate following characteristics:

- Cloud is no longer a stand-alone technology that replaces existing infrastructure technology.
- Cloud solutions deliver critical business functions
- The scale of cloud projects is larger and typically impacts more of the enterprise.
- Cloud is less vendor and technology driven and more user and solution driven, with increasing numbers of solution delivery stakeholders drawn from business functions such as marketing, governance, risk and compliance (GRC) committees and service management teams.

FIGURE 1

Cloud Development Stages



Source: IDC 2015 Cloud End User Study, N=400

THE FINDINGS

While the reasons given for cloud deployment varied, there were some consistent messages given by the interviewed CIOs. Not all were mentioned by all respondents, and the order of importance varied by their stages of maturity and their organisation size, but all of the aspects listed below resonated with all the CIOs.

IT Efficiency

The most frequently mentioned category of cloud-driven value is derived from IT efficiency improvements stemming from changes to the IT sourcing and operational strategies. Typical goals were stated as:

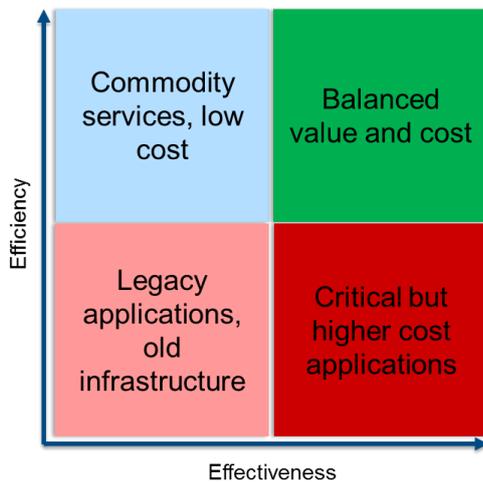
- Better resource utilisation through virtualised servers and storage as per need basis
- Standardisation of IT resources
- Alleviating the need for certain skill sets
- Reducing overheads and outages associated with system/software upgrades
- Economies of scale from sourcing through preferred vendors

Improved IT efficiency allows IT functions to achieve more with less while creating the basis for a more agile and service-oriented business delivery function. Good execution of an IT transformation strategy can release up to 25% of opex and capex budgets for investment in other more strategic value drivers. In essence, efficiency funds agility and innovation.

Key stakeholders and budget holders must include the CIO, enterprise architects, the CFO and procurement. Without a cross-function approach and agreement on budget reallocation full benefits will not be achieved

CIOs also reported that their performance is no longer solely judged on an ability to control costs - they must now demonstrate that they're *effective* in the delivery of business value.

FIGURE 3



All CIOs had replaced some applications and/or infrastructure with IaaS cloud services, while readying to address the demand for new business services enabled by PaaS and SaaS.

CIOs noted that improving IT effectiveness while ignoring supported business processes reduced project success. Business application owners had to be included.

Traditional CIOs from an IT operational background expressed frustration with this; they saw it as a delay to their infrastructure transformation plans. Despite this, they agreed that results improved if business process transformation occurred concurrently.

Source: IDC, 2015

Business Process Improvement

Improving business processes has been the key value driver for IT since Business Process Reengineering (BPR) became mainstream practice in the 1990s. With the overhaul of the IT delivery system brought by cloud, BPR projects can still be effective when combined with the design or assessment of new business solutions.

Laggards can leverage SaaS solutions to realise significant leaps in business process improvement. Organisations can skip painful and costly software packages implementation, and move to cloud-based hybrid solutions incorporating industry best practice processes.

Key value drivers identified by our CIOs in this category are:

- Faster process execution leading to business efficiency
- Higher quality business decisions. In many cases, SaaS offerings provided higher quality of decision-making, including additional contextualised data as decision-making support, for example.
- Fewer resources required for application optimisation and compliance management.

Key stakeholders and budget holders are corporate functional executives including the CFO, CMO, head of supply chain, head of HR, etc., and LOB managers.

Agility

Organisations need to increase their ability to react quickly to changing market and business environments. This has a direct impact on IT. Agility takes many forms, but when enabled by cloud computing includes changes such as:

- Move from capex to opex. By moving costs from capex to opex, from fixed long-term costs to flexible variable consumption-based expenses, companies achieve a more flexible operational model.
- Leveraging cloud deployments to speed provisioning. This allows for much faster cycles of testing various configurations of IT solutions.
- Deliver flexible usage models. For SaaS solutions, adding and removing usage, as well as letting the business pay for its own consumption, helps organisations stay more flexible with budgeting and actual spending.
- Support burstable capacity. Capacity that ‘bursts’ into public clouds at peak loads is another great way for companies to increase their agility from cloud computing.

Key stakeholders and budget holders are CFO, CIO, and LOBs.

Innovation

The global digital transformation is emerging as a disruptor of the overall economy. This enablement of innovation through digitisation is increasingly important to gain advantage or simply stay aligned with changing market environments.

The use of cloud-based analytical applications for improved medical diagnosis or for predictive analysis of customer buying patterns to track customer sentiment are just two examples of the power available for hybrid cloud applications.

IT is now playing in a whole new world, creating:

- A full omni-channel experience based on data and predictive analytics that ensures that a customer is presented the most appropriate engagement platform for their profile and needs.
- New and coordinated channels for communication and commerce with customers and influencers.
- New offerings to augment existing products or completely new products.

Technologies such as 3D printing, Internet of Things, cognitive systems, robotics, and drones are enabled by massive cloud based data-computing capabilities which will accelerate the digital transformation and facilitate further innovations. Most of these technologies will be delivered via hybrid cloud architectures that connect, secure and manage devices at the edge of the network to the datacenter.

Organisations need to seek new value propositions based on partnerships with enterprises in adjacent or different industries. Exploring partnering opportunities with other enterprises offering standards-based cloud solutions enable access to new markets. Major disruptions to industries that a given organisation creates or reacts to need to be evaluated.

Key stakeholders and budget holders are CMO, CDO, CTO, CIO, CEO, corporate development, and LOB managers.

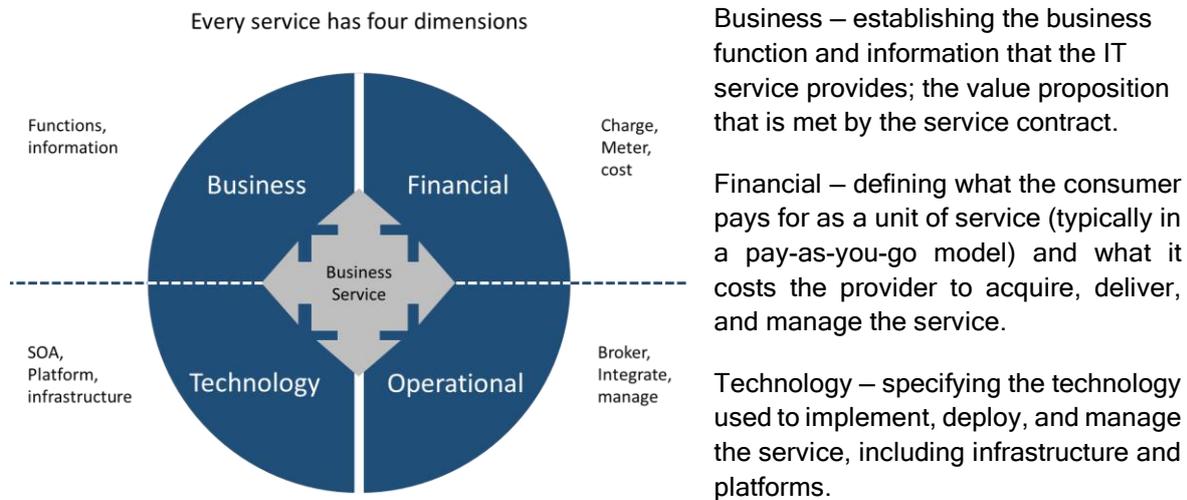
Delivering IT-as-a-Service Using Hybrid Clouds

CIOs agreed that they’re heading towards a new IT delivery model enabled by new technology and by changing business expectations. IDC calls this “IT as a service”, or ITaaS, a model where the delivery of business services is fulfilled by sourcing from the most appropriate provider. It recongises that internal IT may not always be the most appropriate supplier of services.

ITaaS strives to balance internal and external supply of service assets with the customer's (business) demands for those services. IDC research suggests that ITaaS business-oriented services have four essential dimensions (see Figure 3):

FIGURE 3

Dimensions of IT Business-Oriented Services



Source: IDC, 2015

Operational – tasks that the provider brokers, integrates, and manages the service to meet business, financial, and technical performance goals.

An ITaaS strategy depends fundamentally on a hybrid cloud environment. ITaaS is the next, natural step in the maturation of private cloud deployments to become hybrid clouds.

In our interviews, IDC found common hybrid cloud use cases that included:

- Development and testing of application workloads and performance
- Disaster recovery and business continuity
- CRM deployments via a hybrid deployment model
- The addition of data analytics functions to legacy applications.

As many of these new business applications will draw resources from outside the organisation (e.g. geo-location and financial information of customers), they will often require some mix of compliance standards, a baseline of business data sharing, service-level management (SLM) and/or operations management, service integration, and service portal centralisation for access and control. Consequently, as the move from on-premises and private to hybrid takes place, there is a need for a number of changes to be made in the way that IT and the business managers acquire, view, consume and pay for their new solutions. Some apply to IT, some to business, and some to both.

Hybrid cloud environments will require a service broker mentality - defining and driving business value by sourcing and managing IT capabilities from internal and external providers. CIOs embarking on a brokerage strategy must have a customer-first approach, defining who the customer is and what the customer requires.

CIO RECOMMENDATIONS

Create a Cloud Centre of Excellence

The move from a private to a hybrid cloud architecture introduces a new set of requirements for infrastructure and operations teams across people, processes, information, and technologies. Organisations moving to hybrid often encounter a lack of the required skill sets, an increased need for integration of skills specific to cloud platforms, and more process automation acumen. Common deployment pitfalls can be summarised as:

- A lack of a clear strategy,
- Poorly defined business and technology metrics, and
- A lack of necessary cloud-centric staffing roles.

CIOs reported that they had these skills, but they were scattered and inconsistent. IDC's research suggests the creation of a cloud centre of excellence (CoE) to consolidate (and share) best practices and accelerate the business outcomes that hybrid cloud architectures can deliver. The CoE should have a number of responsibilities:

- Identification (and hiring) of required skill sets such as cloud vendor management, negotiation and risk management tactics, new technology analysis, data analytics, business acumen and case delivery, and financial management.
- Process Development covering technology and business process knowledge, integration requirements, automation knowledge, and customer process knowledge. Other areas include service-level management, security, and governance policies and procedures.
- Information Collection and correlation, data policies, analytics, security, and transformation.
- Technology, including hybrid cloud account setup and consolidation, security, billing knowledge and forecasting, self-service portal development, integration, automation and management acumen, and customer feedback mechanisms.

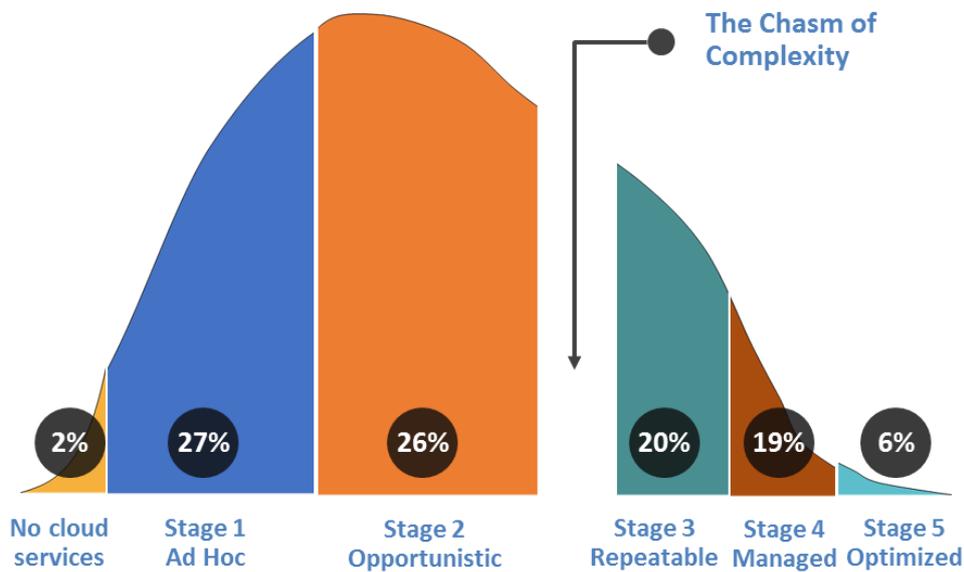
The CoE can act as a broker, managing the relationship and expectations between the internal and external providers but requires strong executive leadership and an aggressive, smart, and collaborative team.

Work With a Trusted Partner

Not all of our CIOs felt that they would be able to assemble a cloud CoE from their organisation's staff resources as cloud maturity varies considerably across Australia. IDC has measured the maturity of Australian organisations by way of the IDC Annual CloudView Survey and plotting the distribution of results across the 5-stage IDC cloud maturity model, shown in Figure 4.

FIGURE 4

IDC Cloud Maturity Results for Australia, 2015



Source: IDC 2015 Cloud End User Study, N=400

IDC has found that moving from Stage 2 to Stage 3 required large investments in time, budget and people. Those successfully jumping the chasm made extensive use of professional services from carefully selected partners.

This is a notable lesson; treat the use of cloud services like any engagement with an external services provider. Even with the standardised, self-service offerings available from the Cloud, the IT team must invest time in planning from the earliest stage and use an experienced partner to provide advice in order to avoid the possibility of any small but annoying obstacles which could add risk to the project.

A service provider can also augment the skills needed to standardise, broker and manage workloads unless the enterprise is willing to invest in house for this talent.

Define New Business Metrics

Adopting a hybrid cloud model is not just about cost reduction, although that could be one of the business metrics used to define success. What IDC found from the CIO interviews was that IT organisations must define the business and technology metrics that are expected as outcomes of a hybrid cloud service. Business metrics are often poorly defined and lack business value terminology (speed, value, cost avoidance, revenue and profit increases, etc.).

Defining business metrics prior to starting the project is critical to identifying success and understanding potential failure points. Speed and quality are sustainable competitive advantages that hybrid cloud models can offer when deployed properly.

Hybrid cloud offers opportunity to drive these capabilities across an organisation, while also offering flexibility, agility, cost reduction and avoidance, and compliance benefits.

Identify Business and Technology Integration Points

The move from on-premises or a private cloud to a hybrid cloud demands more integration points specifically across business and technology processes. For the CIOs that IDC interviewed, this proved to be a big challenge.

Most had come from IT operational roles and had limited exposure to the business processes and, conversely, the business managers had little knowledge of the IT infrastructure. Many organisations have integration skill sets (either internally or through third parties); however, cloud-specific integration skills are often harder to find and more expensive.

Before a deployment, a clear integration road map drives success and identifies potential problems. Hybrid cloud security integration was seen as another common impact point – where teams utilise security policies and procedures, authentication, authorisation, and identity management. There are also integrations into management, alerting, and monitoring systems that help drive performance visibility in a hybrid cloud environment.

Establish Cloud Vendor Management Expertise

Hybrid cloud opens the door to new cloud providers and opportunities to extend existing vendor relationships, but with business managers spending and dictating a growing percentage of the IT budget on cloud-based services, IT must take action and use their knowledge and experience to drive business value. Vendor management is one of the key areas that was uniformly agreed as being lacking in most of our interviewees organisations and should be included within the cloud CoE.

The two organisations interviewed that did have a cloud-first policy believed that they were ready to take advantage of existing vendor relationships by analysing contract terms and conditions and matching hybrid solutions to the renewal of enterprise license agreements (ELAs).

IDC agrees that it's critical that executives have a deep understanding of the commitment level of the vendor as it relates to hybrid cloud product development, support, integration investment, and future road maps. An investment into cloud vendor management expertise can help control costs and centralise the knowledge of each vendor's specific billing practices and cost models. By doing so, IT can help business units and other teams optimise the best-fit billing choice, communicate critical cost information, reduce the number of vendors in use, and create leverage for the business.

The vendor management expertise should also be used to drive policy standardisation and help with unique business and technology requirements that vendors must adhere to. When problems arise with either a vendor or a hybrid service, the team can be a key component of the problem resolution procedures, streamlining and collaborating with internal and external teams. Standardisation is a key goal for the vendor management team – to the extent that it doesn't harm innovation or negatively impact business outcomes.

Change the IT Budget Model

Cloud benefits are not just about cost reduction. The cloud model offered benefits unattainable with traditional on-premises or outsourced arrangements.

- No need for initial high capital outlays;
- Predictable but flexible costs;
- Better cost management with the help of a trusted partner.

Not all IT vendors have the same financial capability. Some offer very attractive financing options to convert the once-off costs of hardware and professional services to annualised opex. If their

capabilities are fully understood and exploited, significant change in the budget structure can be achieved.

As a result, many vendors are being implicitly asked to shoulder much of the financial risk in IT projects and only the most financially secure are able to accept this responsibility. Though this approach better aligns IT to fluctuating business demands, it also asks CIOs to take on new responsibilities of a financial rather technical nature.

Deeply Engage both Internal and External Partners

Hybrid cloud services demand that both internal (IT, business managers, and finance) and external (vendors, consultants, and business partners) stakeholders share an equal role in delivering business outcomes, but often IT organisations will claim there is too much risk for deployment success as success requires a shared responsibility between the vendor and IT organisation.

In IDC's interviews the topic of the importance of partners was raised in a number of cases but the focus was invariably on their *external* technology partners; not surprising as most of the interviewees have always worked that way.

However, it was also noted by just one that it is critical that the cloud team identifies all the key *internal* stakeholders across business and technology teams as well as external providers. The key message from this one CIO was that teams must map out what each group is responsible for in the hybrid cloud strategy and plan thoughtful ownership and execution of those responsibilities.

REMAINING CHALLENGES AND OPPORTUNITIES

In spite of the broad spectrum of business types and applications included within this research, there are also significant similarities in experience offering valuable lessons for any CIO starting a cloud project.

Some common threads in all our CIO discussions are outlined below:

- Building business continuity into hybrid cloud architectures
- Change management needed for IT and Business alignment
- Determining how changing sourcing strategies will impact enterprise risk
- Leaving it all to the CIO's office to make the change

Challenges are often categorised as risks. While technology risk may be minimal, there were thought to be significant risks in other areas including:

- Vendor capability to deliver the contracted service was not as they claimed. For example, the financial aspects of the project must be explicitly clarified in advance of the project.
- Scrutinise the pricing models offered and ensure alignment with the organisation's needs. Those that do not expend considerable time in fully understanding the commercial aspects of the services offered could easily fail to gain the benefits of the cloud model.

CONCLUSION

IDC has identified justifications for hybrid cloud solutions and the way they delivered business value from their use.

While the rapidly increasing choice of services allows many permutations of use, much flexibility and agility, hybrid cloud also brings some new challenges to the CIO and the IT team.

Managing service delivery which incorporates elements from a number of providers, if not planned properly, could open the organisation up to poor service availability and failure to meet governance benchmarks.

1. The key messages which our CIOs agreed were most important are derived from their early experiences
2. Transform your IT team - pure technical skills are no longer adequate
3. Build strong communication lines with the business managers to ensure earliest understanding of their IT infrastructure and service needs.
4. Assess your existing partners to identify those which add business value as well as supplementing your technical capabilities. The next five years will demand faultless execution so having the essential expertise available is critical.
5. Transition your IT budget to an opex-focused model and select your suppliers on their ability to provide their products and services within an opex model.

About IDC

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